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Mineral Industry Surveys

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ANTIMONY IN THE FOURTH QUARTER 2005

Consumption of primary antimony in the fourth quarter of 2005 was estimated by the U.S. Geological Survey to be about the same as that in the third quarter of 2005 and 8% lower than that in the fourth quarter of 2004. Estimated consumption for the full year 2005 was 10,100 metric tons (t), about 10% below that estimated for 2004. China was the leading supplier to the United States of antimony ore and concentrate and metal during the first 11 months of 2005, while Mexico was the leading supplier of antimony oxide during the same period.

Antimony prices remained fairly steady in the fourth quarter. The Platt Metals Week New York dealer price for antimony metal started the fourth quarter in the range of $1.83 to $1.89 per pound and ended the quarter at $1.82 to $1.89 per pound.

The China Nonferrous Metals Association announced that China was the leader in global production for 10 nonferrous metals in 2005. That included a figure of 146,000 (t) of antimony (Metal-Pages, 2006a§[1]).

United States Antimony Corp. (USAC) is the last diversified producer of antimony products in the United States. All other producers have closed down or left the United States primarily owing to the control of pricing of raw materials by producers in China. In December 2005, USAC purchased the outstanding stock of Antimonio de Mexico. Sites are being evaluated for the installation of a mill and furnace operation in Mexico (Metal-Pages, 2006d§).

The Ministry of Commerce of the People's Republic of China issued a list of 31 state-owned trading companies authorized to export antimony during 2006. Included were: China Minmetals Nonferrous Metals Co., Ltd.; Shanxing Antimony Corp., Ltd.; Liuzhou China Tin Group Co., Ltd.; Yunnan United Antimony Co., Ltd.; Hechi Wuji Co., Ltd.; Dongguan Jiefu Co., Ltd.; and Chengyuan Smelting Co, Ltd. (Metal-Pages, 2006c§).

In China, the General Administration of Customs announced that exports of antimony surged during 2005. China exported 29,800 t of antimony in 2005, an increase of 39% compared with that in 2004 (Metal-Pages, 2006b§).

China's antimony resources are mainly distributed in Gansu, Guangxi, Guizhou, Hunan, Jiangxi, and Yunnan provinces. Hunan has taken the place of Guangxi as the leading antimony ore producing area in China. Many significant antimony mines have exhausted over 80% of their extractable reserves, and both the quality and quantity of the ores are declining. In 2005, the Ministry of Land and Resources released a list of the 291 qualified miners of antimony, rare earths, and tin. Other mining enterprises not on the list will be monitored. With stricter measures against mining, exploitation of antimony resources will gradually be under Government control. In 2005, the national output of antimony concentrate was only 61,800 t, far less than the output of refined metal. This may indicate that, in addition to secondary antimony production, there was a large quantity of inventory and unreported private production of concentrate supplied to the smelters. In 2005, antimony smelters faced tighter supplies of raw materials, and many of them depended increasingly on inventoried concentrate. Hunan, Guangxi, and Yunnan provinces respectively contributed 59%, 20%, and 10% to the national output of refined antimony. Among antimony refiners reporting a large increase in antimony production in 2005 were: Hechi City South Nonferrous Metals Co., Ltd.; Yiyang City Hongda Antimony Co., Ltd.; Hsikwangshan Twinkling Star Antimony Co., Ltd.; and Dushan County Dongfeng Group Co., Ltd. However, with less output of domestic antimony concentrates, many smelters cut or even suspended their refinery production and some turned to imported concentrates to maintain production. Data from the General Administration of Customs showed that China imported 21,900 t of antimony concentrates in 2005, compared to 18,000 t in 2004.

In China there are fewer than 60 antimony smelters maintaining normal production, and only 3 of them have a capacity of over 5,000 metric tons per year (t/yr), namely Hsikwangshan Twinkling Star Antimony Co., Ltd.; Liuzhou China Tin Group Co., Ltd.; and Hunan Chenzhou Mining Co., Ltd. There are also three antimony oxide producers with a capacity over 5,000 t/yr: Hsikwangshan; Yunnan Muli Antimony Co., Ltd.; and Guangxi Huati Chemical Co., Ltd. Fire retardant chemicals are the major end use for antimony,

[1]References that include a section mark (§) are found in the Internet References Cited section.

accounting for 70% of the world's refined antimony and 90% of antimony oxide. The world consumes an estimated 120,000 t of antimony oxide per year. About 50% of China's antimony consumption goes to the flame retardant industry. China now consumes an estimated 30,000 t of antimony per year (Beijing Antaike Information Development Co., Ltd., 2006).

Update

On March 2, 2006, the Platts Metals Week dealer price for antimony was $2.15 to $2.20 per pound.

Reference Cited

Beijing Antaike Information Development Co., Ltd., 2006, Review on China's antimony market in 2005: China Metal Market—Precious and Minor Metals, no. 73, March, p. 2-3.

Internet References Cited

Metal-Pages, 2006a (February 13), China leads global output for major non-ferrous metals, accessed February 13, 2006, via URL http://www.metal-pages.com.

Metal-Pages, 2006b (January 25), China ups Sb and Mn exports, accessed January 25, 2006, via URL http://www.metal-pages.com.

Metal-Pages, 2006c (January 19), Chinese companies approved to export antimony, accessed January 19, 2006, via URL http://www.metal-pages.com.

Metal-Pages, 2006d (February 14), USAC starts developing antimony and silver deposit in Mexico, accessed February 14, 2006, via URL http://www.metal-pages.com.

TABLE 1
SALIENT ANTIMONY STATISTICS[1]

(Metric tons, antimony content, unless otherwise specified)

		2005			
	2004	First quarter	Second quarter	Third quarter	Fourth quarter
Production:					
Primary smelter[2]	W	--	--	--	--
Secondary	4,150	W	W	W	W
Imports for consumption:	33,500	7,930	7,960	6,410 r	4,710 3
Ore and concentrate	1,750	40	60	76	20 3
Metal	8,270	1,840	1,700	1,300 r	1,210 3
Oxide[4]	23,500	6,050	6,200	5,030 r	3,480 3
Exports:	4,480	925 r	548	392 r	377 3
Metal, alloys, and scrap (gross weight)	566	169	209	177 r	108 3
Oxide[4]	3,910	756 r	339	214 r	270 3
Consumption of primary antimony	11,200	2,870	2,530	2,370 r	2,350
Price: Average cents per pound[5]	130.31	142.50	146.92	170.60	181.83
Stocks, end of period[6]	XX	1,940	1,990	1,930 r	1,910

rRevised. W Withheld to avoid disclosing company proprietary data. XX Not applicable. -- Zero.
[1]Data are rounded to no more than three significant digits, except prices.
[2]Nearly all primary smelter output is antimony trioxide.
[3]Data for October and November only; December data were not available at time of publication.
[4]Antimony content is calculated by the U.S. Geological Survey.
[5]Source: Platts Metals Week. New York dealer price for 99.5% to 99.6% metal, c.i.f. U.S. ports.
[6]Producer and consumer stocks.

TABLE 2
INDUSTRY STOCKS OF PRIMARY ANTIMONY
IN THE UNITED STATES[1]

(Metric tons, antimony content)

	2005[2]			
Class of material	First quarter	Second quarter	Third quarter	Fourth quarter
Metal	W	W	W	W
Oxide	1,460	1,500	1,480 r	1,450
Other[3]	483	489	449	452
Total	1,940	1,990	1,930 r	1,910

rRevised. W Withheld to avoid disclosing company proprietary data.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Estimated 100% coverage based on reports from respondents who held 59% of the total stocks of antimony at the end of 2004.
[3]Includes ore and concentrate, sulfide, and residues.

TABLE 3
INDUSTRIAL CONSUMPTION OF PRIMARY ANTIMONY[1, 2]

(Metric tons, antimony content)

		2005[2]				
Class of material consumed	2004	First quarter	Second quarter	Third quarter	Fourth quarter	Total
Oxide	9,390	2,370	2,160	2,000 r	2,010	8,530
Other[3]	1,810	496	372	368	345	1,580
Total	11,200	2,870	2,530	2,370 r	2,350	10,100

rRevised.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Estimated 100% coverage based on reports from respondents who consumed 27% of the total antimony in 2004.
[3]Includes ores and concentrates, metal, sulfide, and residues.

TABLE 4
REPORTED CONSUMPTION OF PRIMARY ANTIMONY, BY CLASS OF MATERIAL PRODUCED[1]

(Metric tons, antimony content)

Product	2004	2005				
		First quarter	Second quarter	Third quarter	Fourth quarter	Total
Metal[2]	W	W	W	W	W	W
Nonmetal[3]	W	W	W	W	W	W
Flame-retardants:						
Plastics	4,690	93	90	83	88	353
Other[4]	1,050	173	166	138 r	135	612
Total	5,740	266	256	221 r	223	965
Grand total	11,200	776	673	632 r	624	2,710
Total estimated[5]	XX	2,870	2,530	2,370 r	2,350	10,100

rRevised. W Withheld to avoid disclosing company proprietary data; included with "Grand total." XX Not applicable.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes ammunition, antimonial lead, bearing metals and bearings, cable coverings, castings, sheet and pipe, and solder.
[3]Includes ammunition primers, pigments, ceramics and glass, and plastics.
[4]Includes adhesives, pigments, rubber, and textiles.
[5]Estimated 100% coverage based on reports from respondents who consumed 27% of the total antimony in 2004.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ANTIMONY, BY CLASS AND COUNTRY[1]

(Metric tons, antimony content)

Class and country	2004	2005					
		January-June	September	Third quarter[2]	October	November	January-November[2]
Ore and concentrate:							
China	1,380	100	--	19	20	--	138
Other	374	--	--	57	--	--	57
Total	1,750	100	--	76	20	--	195
Metal:							
China	5,820	2,230	260	612	682	120	3,640
Mexico	785	419	27	308	39	87	853
Peru	501	189	109	187	17	69	461
Other	1,160	706	11	190	167	31	1,100
Total	8,270	3,540	407	1,300	905	307	6,050
Oxide:[3]							
Belgium	1,750	795	151	388	134	122	1,030
China	10,700	5,570	259	1,850	882	533	7,160
Hong Kong	432	83	--	30	--	33	146
Mexico	9,590	5,260	768	2,360	710	677	9,000
South Africa	656	--	--	--	--	--	--
Other	322	549	111	408	202	186	3,430
Total	23,500	12,300	1,290	5,030	1,930	1,550	20,800
Grand total	33,500	15,900	1,700	6,410	2,850	1,860	27,000
Other antimony compounds (gross weight)	150	31	--	17	5	--	53

-- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]May include revisions to prior months data.
[3]Antimony content is calculated by the U.S. Geological Survey.

Source: U.S. Census Bureau.